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## DIET KITCHEN EFFICIENCY

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There are two kitchens in nearly all large hospitals, each placed there for its special purpose. We have the main kitchen, presided over by a chef, which supplies food to the public ward patients, the doctors, nurses, and employees. Besides this there is also a diet kitchen presided over by a dietitian. In the diet kitchen, under the direction of the dietitian, the pupil nurses of the training school prepare all or part of the food for the private room patients, together with any special diets which may be ordered. It is with this diet kitchen and its problems that we will now chiefly concern ourselves.

The location of the diet kitchen is of first importance. In many of the older hospitals, where the diet kitchen has been added after the hospital was completed, we find it situated in the basement, or even in a separate building. In the modern hospitals architects are carefully studying the situation, and now the most favored location is on the top floor, or one of the upper floors of the building in which are situated the rooms for private patients. In this way the odors and noise from the kitchen are not carried through the whole building, and since the kitchen is near the rooms, the nurses are enabled to carry the trays without delay to the patients as soon as they are served, thus assuring hot food which has not been spoiled by long standing.

The disadvantages of this upper floor situation should also be noted, for it is not always pleasant to have food supplies, ice, garbage, etc. carried through the halls in which are situated the patients' rooms. This can be obviated, to a certain extent, by having an elevator shaft connecting the diet kitchen with the basement or with the main kitchen of the hospital.

The size of the diet kitchen and its equipment are two questions of importance. A large room with plenty of windows is necessary, since from six to twelve nurses beside the dietitian and one or more maids will be constantly working in the room. Several small rooms opening off of a main room will be found to be an advantage, one room to be used for supplies, one for the refrigerators, and one for the dietitian's office, where she can have her desk, away from the heat and noise of the kitchen. A separate sink room where the maids can wash all the soiled utensils and dishes, is an advantage. All the instructing, and the

preparation of the food is done in the main room, and it should be as free from confusion as possible.

The diet kitchen must be equipped with one or two good gas ranges and a gas broiler. Two large copper kettles, heated by steam, one for soup and one for vegetables are desirable, also one or two coffee percolators, heated by steam. Ample table space must be provided where the nurses can work while they are preparing food, and a convenient rack or table for the trays. A long table down the center of the room, wide enough to hold two trays, is a good plan, as the trays are easily set and handled in this way. A large steam-table used to keep the food hot while it is being served is a necessity. Refrigerators and the usual equipment consisting of the small utensils and implements must of course be included. Aluminum will be found very durable for the larger pots and kettles. An electric attachment for freezing ice cream saves much time in a hospital where ice cream is being made daily.

A few words may be added here as to the special equipment for the nurses. Each nurse should be required to carry into the diet kitchen a clean apron and clean cuffs, as she is apt to soil those she is wearing while preparing food and working around the stove. By changing when she leaves the kitchen, she will appear fresh and clean as she passes through the halls of the hospital. Each nurse should have attached to the belt of her apron a small hand towel, and a stove holder made of some heavy material. This may be done by attaching each of these articles to a piece of tape with a loop in the end which is slipped over the belt of the apron. Clean hands and fewer burns are the result of this practice.

The equipment of the trays is perhaps the most important point we have to consider in the diet kitchen. The linen which covers the trays should be of good quality damask, or of a heavy plain linen if it is to be hemstitched. The damask covers will be found to stand the laundry better than the plain linen, for the hemstitching, which looks well, is a disadvantage, since the threads soon break away where the hemstitching is done. A very practical tray cover can be made from damask scarfing, which comes by the yard. It comes in several widths, and may be cut to fit the size of the tray. There will be two selvedge sides, and the other two sides are hemmed on the machine. These covers can be made of good damask at a cost of from 23 cents to 25 cents for each cover.

The trays themselves should be of aluminum or white papier maché. Both have some disadvantages. The aluminum acquires a black oxidation on the under side of the tray, and unless this is removed

frequently by washing, it will leave a mark on the table both in the kitchen and in the patient's room. The papier maché trays are apt to bend and even break if carelessly handled, but on the whole they are the most satisfactory, as they are light, cheap, and easily replaced.

The dishes which are used on the tray should be of attractive design and of medium weight. The breakage of china in a hospital is usually large, and in many hospitals the management makes an effort to eliminate this by supplying heavy china, which is not only unattractive, but weighs down the tray unnecessarily. This is a mistake as the attractive appearance of the tray has a decided effect on the appetite of the patient, and every thing should be done to make it as attractive as possible. The difference in breakage between the heavy china and a lighter grade is very slight and the difference in appearance far outweighs the difference in cost. A considerable amount of china is bound to be broken when a large number of dishes are being handled together, but it will be found that a dish seldom breaks unless it is dropped, and a heavy dish breaks almost as easily as a light one when actually allowed to fall. One way of reducing the breakage as far as the nurses are concerned, is to have each nurse replace at once from the store-room every dish which she breaks.

All dinner plates on which the hot food is served should be covered, preferably with metal silver plated covers. These covers may be heated before the meal is served in a steam heated closet. Silver plated dishes are excellent for serving meat, as they retain the heat longer than china. Tea and coffee pots should also be of plated ware.

Damask napkins of medium size should be placed on each tray, and these together with the tray cover must be changed at every meal. Many hospitals only change the napkins once a day, and in this case the napkin is left in the patient's room from one meal until the next. This method has its disadvantages, as the nurses are apt to neglect to collect the soiled napkins, and the consequence is that they accumulate in the rooms and a shortage results. A clean napkin at every meal is preferable from every standpoint. The practice of using tea napkins at breakfast and supper, and a large napkin at dinner is a good one. The tea napkins are small, inexpensive, and easily laundered.

Open sugar bowls for powdered or granulated sugar are most insanitary, although we find them on the trays in many hospitals. The sugar bowls of course become mixed when the trays are cleared and reset, and the consequence is that the patients get a bowl into which another patient has dipped his spoon at a previous meal, for it is expensive to empty out the sugar each time and put in a fresh supply. No food material of any kind which comes off the tray should be put

back on it again unless it is carefully covered and protected from contamination. Glass sugar shakers with plated screw tops perforated with large holes, are most satisfactory. They take up but little room on the tray, are sanitary, and easily kept clean by wiping with a damp cloth.

In many cases the bread and butter plate will be found to take up unnecessary space on the tray, and to avoid over crowding, this plate may be omitted and the bread and crackers placed in a waxed paper envelope, such as those seen on Pullman dining cars. This envelope is put on top of the napkin, and the butter on a small butter chip may be placed on the tumbler, thus protecting the contents of the glass also.

The trays for the different rooms are numbered in various ways. The most common method is that of using a slip of paper on which is written the number of the room to which the tray is to be sent. This plan is not always satisfactory, as the paper is easily displaced on the tray, and mistakes are apt to result. The slips are sometimes pinned to the tray cover, but this necessitates extra work in unpinning them when the trays are cleared. Small pieces of cardboard with the number printed on them may be used, as these cards are not easily displaced. A plain wooden napkin ring with the number painted or burned on it is an excellent way of designating the trays.

The serving of the trays in the kitchen is accomplished in various ways. One of the most convenient methods is to have all the diets classed together either as regular, soft, liquid, or special. These diets may be listed with the number of the room to which they are to go, and the list referred to by the nurses as each tray is served. If the list is written on a blackboard, placed in a convenient place in the kitchen, it is an easy matter for the nurse to refer to each diet, by glancing at the board, while she is serving the tray. The special diets should be served last, as they generally require special care and attention.

In many private hospitals, where extensive menus are provided, and where the patients may order whatever they wish, it is a good plan to have printed menus, similar to those used in hotels. These may be sent to the patient's room, and the patient, nurse, or doctor check off on the menu such articles as may be desired. The menus are then returned to the diet kitchen long enough before the meal to allow any extras, not on hand, to be provided and prepared. When this method is followed the dietitian can call out, from the menu, the different dishes desired, and the nurses set and serve the tray accordingly.

The efficient distribution of the trays is a problem which must be worked out by each individual hospital, as it is influenced by the architectual plan of the buildings. When the diet kitchen is situated

on the same floor with the patients' rooms, the distribution of the trays is easily accomplished, for they are carried directly to the patient as soon as they are served. It is a good plan to have all trays carried by probation nurses, who are working outside the diet kitchen, as the nurses in the kitchen are busy, and the general floor nurses have not the time to carry trays. There should be at least one probationer on every floor whose duty it is to carry trays to and from the rooms. There will be less confusion in the kitchen if the patients on general floor care are served first, and those with special nurses served last. If the special nurses are required to stand in the hall outside the kitchen, until their number is called there will be no confusion and fewer mistakes. When the diet kitchen is on a different floor from the rooms, dumb-waiters must be resorted to for carrying the trays. Several kinds of dumb-waiters are in use for this purpose, each having its advantages and disadvantages. Those operated by electricity, and controlled by a push button are often seen, but they are not sufficiently perfected as yet to always secure good running order. They are frequently getting out of order, becoming stuck in the shaft, or else something goes wrong with the current. When any of these things happen while a meal is being served, the tray must be carried up or down stairs while the elevator is being repaired. The old fashioned dumb-waiter, controlled by means of a rope, will be found to be very satisfactory, as it seldom gets out of order. This is easily operated if kept in good running order, and accidents will not occur if the rope is watched and renewed when it begins to wear.

In cases where the diet kitchen is in a separate building from the rooms, or where the rooms are in a distant wing, too far to carry trays, we have quite another problem to face. The question arises as to the best method of keeping the food hot while in transit. The electric heated food carriage may be employed here to great advantage. It consists of a metal box on wheels, entirely enclosed, and with sliding doors. Inside are shelves for the trays. The air in this compartment is heated by means of electricity. A plug attachment on the carriage fits into any ordinary electric light socket, and in this way it may be attached and heated in a short time, and disconnected when ready for use.

In the ordinary diet kitchen where the nurses do all of the cooking and serving, it is not practical to try to serve more than fifty or sixty trays in the kitchen itself, for it cannot be done properly. When a larger number is served from one place, the result is that the last patient served gets his tray perhaps an hour or more after the first. Since regularity in meals is necessary in a hospital some other method must

be devised whereby all the trays may be served simultaneously. This can be done by having all the food prepared in the diet kitchen, and then sent in bulk, in a heated food carriage, to the different ward kitchens, where the trays for that particular floor are served. Each ward kitchen should be in charge of a diet nurse who has previously had instruction in the diet kitchen. In this way the trays may all be served at about the same time. The disadvantage is that the dietitian does not see all the trays served, but if she has trained the diet nurses carefully in the diet kitchen, and visits the ward kitchens, one at a time, during serving hours, few mistakes will occur.

The waste of food material is a problem which the average hospital has great difficulty in solving. To a large extent it is not possible to avoid a certain amount of waste on account of the varying conditions present in the hospital. Since the number of trays fluctuates each day, or rather with each meal, it is difficult to calculate closely the amount of food necessary. The dietitian must always be prepared for several extra trays, as anywhere from five to ten new patients may come in, say, an hour before a meal. On the other hand, instead of new patients coming in several may go out, and in this case the extra food is wasted, as it is hard to use up small left-overs in a hospital. Certain staples such as broth, custard, and wine jelly must be kept on hand constantly, ready to be used at a minute's notice, and since these articles are perishable they are wasted unless used soon after they are prepared.

Another cause of waste arises from the fact that the food is being prepared by nurses who know nothing of cooking when they enter the diet kitchen. Mistakes are bound to be made while they are learning, and one dietitian, even if she has an assistant, cannot watch the work of six or eight nurses all the time. Since the food must be sent to the patients in perfect condition, the spoiled dishes are wasted. This may be avoided by giving the nurses a practical course in cooking before they enter the diet kitchen to prepare food for the patients. Then the experimenting is done on a small quantity of food in the practice class instead of in large quantities in the diet kitchen. When the nurse has had a course in cooking before entering the kitchen, she is enabled to prepare the various dishes from recipes without demanding the attention of the dietitian every minute. The recipes for the diet kitchen often prove themselves to be a difficulty. Most dietitians make out their own recipes from well known cook books, in the quantities necessary for the particular diet kitchen of which they have charge. It is rather difficult to decide in what form these recipes should be given to the nurses. Many hospitals use cook books or a blank book in which the recipes have been written. The books are passed out among

the nurses for use in preparing the food, and the consequence is that the books soon become soiled and torn with constant handling. In order to avoid this, a most excellent device is the card index system. A drawer and cards, such as those used in libraries, is procured, and the recipes written on the cards are placed in alphabetical order. It is then easy to turn to the recipe desired, and the card may be given to the nurse who is preparing that special dish. When she finishes, she puts the card back in its place, provided she has kept it spotless. If she soils the card in any way she is required to copy the recipe on a fresh card, printing the directions as she would do for a chart.

We have now covered the most important problems which are apt to present themselves in the diet kitchen. There are others of minor importance, which it would take pages to discuss. The dietitian herself often proves to be a problem to the hospital, for good dietitians are few and far between. The efficiency of the dietitian, however, is outside our present field, and the problems connected with her, as an individual, go to make up quite another story.

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Very few of the nurses who are engaged in public health work today have had the necessary preliminary training to fit themselves for this most important work. This also applies to the health officers. Most of the nurses in the field are successful in the work, but it is not because of the training they have had. They are successful in spite of it. They are naturally adapted to it. They are in the work because they have seen opportunities that others have not seen. They have been alert to grapple with the new problems and these nurses have trained themselves at expense of time and energy and often the progress of the work. The success of public health work has been interfered with frequently because of the lack of training of the workers. We need training schools which will meet the new demand; which will prepare nurses who care to enter this newer field; and which will set a standard so that all our nurses will be trained alike and along correct lines. Without them we are going to fall into many errors. Each nurse will develop her own standards and ideas of efficiency, her own methods of handling the problems she meets, and before we are aware of it, we shall be hopelessly mixed. We shall have no uniformity and no standards. We cannot afford to let each one do this for herself. We need standardized uniformity in training and methods of carrying on the work. Our training schools can alone furnish such standards.—*Wm. DeKleine, M.D.*